DIN EN ISO 22476-4:2021-12 (E)

Geotechnical investigation and testing - Field testing - Part 4: Prebored pressuremeter test by Ménard procedure (ISO 22476-4:2021)

Contents

Page

European foreword ... **4**

Foreword ... **5**

Introduction ... **6**

1 Scope ... **8**

2 Normative references ... **8**

3 Terms, definitions and symbols ... **8**
3.1 Terms and definitions ... 8
3.2 Symbols ... 10

4 Equipment ... **13**
4.1 General description ... 13
4.2 Pressuremeter probe ... 13
4.2.1 General ... 13
4.2.2 Probe with flexible cover ... 15
4.2.3 Probe with flexible cover and an additional more rigid protection ... 15
4.2.4 Probe with flexible cover and slotted tube ... 16
4.3 Connecting lines and injected fluid ... 17
4.4 Pressure and volume control unit ... 18
4.4.1 General ... 18
4.4.2 Measurement and control ... 18
4.4.3 Data logger ... 19

5 Test procedure ... **19**
5.1 Assembling the parts ... 19
5.2 Calibration and corrections ... 20
5.3 Pressuremeter test pocket and probe placing ... 20
5.4 Preparation for testing ... 20
5.5 Establishing the loading programme ... 21
5.6 Establishing the pressure of the guard cells for tri-cell probes ... 22
5.7 Expansion ... 22
5.7.1 General ... 22
5.7.2 Readings and recordings ... 22
5.7.3 End of test ... 23
5.8 Back-filling of the pockets ... 23
5.9 Safety requirements ... 23

6 Test results ... **23**
6.1 Data sheet and field print-out or display ... 23
6.1.1 Data sheet for type A control unit ... 23
6.1.2 Site print-out for type B and C control units ... 24
6.1.3 Raw pressuremeter curve ... 24
6.2 Corrected pressuremeter curve ... 24
6.3 Calculated results ... 25

7 Reporting ... **26**
7.1 General ... 26
7.2 Field report ... 26
7.3 Test report ... 26
7.3.1 General ... 26
7.3.2 Ménard pressuremeter test report ... 26
7.3.3 Pressuremeter tests log ... 27

Annex A (normative) **Geometrical features of pressuremeter probes** **29**
Annex B (normative) **Calibration and corrections** **31**
Annex C (normative) **Placing the pressuremeter probe in the ground** **40**
Annex D (normative) **Obtaining pressuremeter parameters** **48**
Annex E (normative) **Uncertainties** **58**
Annex F (informative) **Pressuremeter test records** **59**
Bibliography **66**